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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,697	11/16/2005	Karim Zaghib	0055676-000016	8693
21839 7590 02/04/2011 BUCHANAN, INGERSOLL & ROONEY PC POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			EXAMINER WILLS, MONIQUE M	
			ART UNIT 1728	PAPER NUMBER
			NOTIFICATION DATE 02/04/2011	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/534,697	Applicant(s) ZAGHIB ET AL.	
	Examiner Monique M. Wills	Art Unit 1728	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-82 is/are pending in the application.
- 4a) Of the above claim(s) 20,27,33-38,40-48 and 50-80 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19,21-26,28-32,39 and 49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/9/2010, 5/4/2006, 5/13/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statements filed May 13, 2010, May 4, 2010 and August 9, 2010 has/have been received and complies with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. Accordingly, the information disclosure statement(s) is/are being considered by the examiner, and an initial copied is attached herewith.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12-13, 18, 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 contains the trademark/trade name Cellogen. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the

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present case, the trademark/trade name is used to identify/describe a thickening agent and, accordingly, the identification/description is indefinite.

With respect to claim 13, "EP", "7A", "WSC", "BS-H" are of uncertain meaning, rendering the claims vague and indefinite. The term "sold by Daiichi Kogyo Seiyaku Co. of Japan" is similar to the use of a brand name, where the source is used to identify or describe a particular material or product. Such use does not comply with the requirements of 112. The claim scope is uncertain since the source is a manufacturer. An appropriate correction is required.

With respect to claim 18, the term "sold by NIPPON ZEON'S BINDER BATTERY GRADE" is similar to the use of a brand name, where the source is used to identify or describe a particular material or product. Such use does not comply with the requirements of 112. The claim scope is uncertain since the source is a manufacturer. An appropriate correction is required.

With respect to claim 23, the term "are removed by heat treatment in line of the EXT, DBH and/or DB process" is of uncertain meaning rendering the claim vague and indefinite. It is unclear as to what these drying abbreviation processes are. The examiner suggests spelling out the processes to clarify the claim language.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-19, 22, 24-26, 28-29, 39 and 49 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyasaka U.S. Pat. 6,416,902.

Miyasaka teaches a process for preparing an electrode that is at least partly coated with a film obtained by spreading and drying, on an electrode support, an aqueous solution comprising at least one active material, at least one water soluble binder (butadiene; col. 8, lines 25-30) and at least one water soluble thickening agent (carboxymethyl cellulose, col. 9, lines 5-10). See column 12, lines 25-40.

The positive active material is a metallic oxide such as LiNiCoBO (col. 12, lines 20-25). The metallic oxide is LiNiO₂ (col. 4, lines 35-40); the carbon is selected from the group consisting of high surface area carbon, graphite and carbon fibers (col. 6, lines 25-35); the metals are selected from the group consisting of Sn (col. 7, lines 40-50). The chemically and/or electrochemically active material is in the form of powder whose average particle size is between 1 and 30 microns. See column 5, lines 45-55. The limitation with respect to 20% of the binder and/or thickening agent are water soluble at the rate of 20 grams in 100 grams of water, at room temperature, is considered an inherent property of the thickening agent set forth because the carboxymethylcellulose is identical to the instant claims. Support for this assertion is provided in MPEP

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2112.01, "[where] [p]roducts of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, since Miyasaka teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. See *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The water soluble thickening agent is selected from the group consisted modified celluloses, such as carboxymethyl cellulose. See column 9, lines 5-15. The binder is a synthetic rubber such as polypropyleneoxide. See column 8, lines 30-40. The binder may be non fluorinated, such as polypropylene oxide. See column 8, lines 30-40. The rubber is selected from styrene butadiene rubber (col. 8, lines 30-35). The thickening agent is EP (ethylene/propylene copolymer). See column 8, lines 30-40. The electrode is negative and the electrochemically active material used is selected from the group consisting of powders of Sn. See column 7, lines 45-55. Carbon fiber grains have an ellipsoidal shape. See column 7, lines 30-40 & column , lines 25-35. The positive electrode is LiNiO_2 (col. 4, lines 35-40);

Therefore, the instant claims are anticipated by Miyasaka.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21 & 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyasaka U.S. Pat. 6,416,902 in view of Okawa et al. U.S. Pub. 2002/0106564.

Miyasaka teaches a process for preparing a positive electrode as described in the rejection recited hereinabove.

Miyasaka does not expressly disclose: LiFePO_4 coated with particles of graphite (claim 21); the specific surface area of the carbon present in the coating, measured by BET, is $\geq 50 \text{ m}^2/\text{g}$ (claim 31); coating carried out by mechano-melting (claim 32).

Okawa teaches that it is well known in the art to employ LiFePO_4 coated with carbon material (par. 27) because it is less costly, low in toxicity and less aggressive to the environment (par. 8). The coating composite is $10.3 \text{ m}^2/\text{g}$ (par. 37). The coating is carried out by mixing and melting by sintering. See paragraph 67.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to employ the carbon coated LiFePO_4 of Okawa, as the positive electrode material of Miyasaka, because LiFePO_4 is less costly, low in

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toxicity and less aggressive to the environment than lithium transition metal oxide materials used by Miyasaka.

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Jennifer Michener, may be reached at 571-272-1424. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->

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direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Monique M Wills/
Examiner, Art Unit 1795

/Jennifer K. Michener/
Supervisory Patent Examiner, Art Unit 1728